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# SCIENCE

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## THE SCIENTIFIC BASIS OF THE ILLINOIS SYSTEM OF PERMANENT SOIL FERTILITY<sup>1</sup>

It is practically impossible to cover, in an adequate way, the scientific principles underlying the Illinois system of permanent soil fertility in the brief space of time allotted me on the program. Nevertheless, I shall point out the fundamental principles underlying the system without attempting to illustrate the points made by definite data as I should like to do.

Eighty years ago Liebig, the father of agricultural chemistry, made the following statement:

Agriculture is, of all industrial pursuits, the richest in facts, and the poorest in their comprehension. Facts are like grains of sand which are moved by the wind, but principles are these same grains cemented into rocks.

The great contribution made to American agriculture by the late Dr. Hopkins was the gathering together, classifying, interpreting and unifying, by his own investigations the known facts of agriculture, into a definite whole as practised and taught by him in the Illinois system of permanent soil fertility.

Many of the facts upon which the Illinois system rests have been known for many years and even centuries and have been developed by other men in other institutions and in other times. It remained, however, for Dr. Hopkins to bring together and unify these isolated facts into a definite workable system and by his own investigation to demonstrate clearly that the system could be understood and used by the average farmer on his own farm with very profitable results. In his interpretation of the facts upon which the system is based, all men have not agreed and some even still do not agree with him but the system rests on the

<sup>1</sup> An address given at the Hopkins Memorial, January 22, 1920